ANALYTICA CHIMICA ACTA

An international journal devoted to all branches of analytical chemistry

(Full texts are incorporated in CJELSEVIER, a file in the Chemical Journals Online database available on STN International; Abstracted, indexed in: Aluminium Abstracts; Anal. Abstr.; Biol. Abstr.; BIOSIS; Chem. Abstr.; Curr. Contents Phys. Chem. Earth Sci.; Engineered Materials Abstracts; Excerpta Medica; Index Med.; Life Sci.; Mass Spectrum. Bull.; Material Business Alerts; Metals Abstracts; Sci. Citation Index)

VOL. 403 NOS. 1–2 CONTENTS January 3, 2000

Sensors

Peroxidase enzyme electrodes as nitric oxide biosensors
E. Casero, M. Darder, F. Pariente and E. Lorenzo (Madrid, Spain) 1

Sensor for amperometric determination of ammonia and ammonia-forming enzyme reactions
B. Strehlitz, B. Gründig and H. Kopinke (Leipzig, Germany) 11

Improvement of urease based biosensor characteristics using additional layers of charged polymers
A.P. Soldatkin, V. Volotovsky, A.V. El'skaya (Kyiv, Ukraine), N. Jaffrezic-Renault and C. Martelet (Ecully Cedex, France) .. 25

Classification of complex gas mixtures from automotive leather using an electronic nose
E.L. Kalman (Linköping, Sweden), A. Löfvendahl (Göteborg, Sweden), F. Winquist and I. Lundström (Linköping, Sweden) 31

Multi-channel piezoelectric quartz crystal sensor for organic vapours
P. Chang and J.-S. Shih (Taipei, Taiwan) 39

Affinity mass sensors: determination of fructose
O.-W. Lau, B. Shao and M.T.W. Lee (Hong Kong, PR China) 49

Single standard calibration for an optical oxygen sensor based on luminescence quenching of a ruthenium complex
M.M.F. Choi and D. Xiao (Hong Kong, China) 57

Polymer-coated optical fibres for application in a direct evanescent wave immunoassay
C. Preininger, A. Mencaglia and F. Baldini (Firenze, Italy) 67

Membrane Science

Methacrylic–acrylic polymers in ion-selective membranes: achieving the right polymer recipe
L.Y. Heng and E.A. Hall (Cambridge, UK) 77

Determination of structural and electrical parameters for activated composite membranes containing di-(2-ethylhexyl)dithiophosphoric acid as carrier
M. Oleinikova, M. Muñoz (Barcelona, Spain), J. Benavente (Málaga, Spain) and M. Valiente (Barcelona, Spain) 91

Metal affinity liquid membrane. Facilitated transport of nitrite
J.A. Calzado, C. Palet and M. Valiente (Catalunya, Spain) 101

Electroanalytical chemistry

On the estimate of blanks in differential pulse voltammetric techniques: application to detection limits evaluation as recommended by IUPAC
R. Blanc, A. González-Casado, A. Navalón and J.L. Vilchez (Granada, Spain) 117

(Continued overleaf)

http://chemweb.com/gateways/elsevier.html

This journal is part of **ContentsDirect**, the ***free*** alerting service which sends tables of contents by e-mail for Elsevier Science books and journals. You can register for **ContentsDirect** online at: **www.elsevier.nl/locate/contentsdirect**

Chemiluminescence

Chemiluminescent determination of lucigenin using thioureid derivatives
M.(H.) Kanemitsu, H. Arakawa, R. Yoda and M. Maeda (Tokyo, Japan) 125

Lophine derivatives and analogues as new phenolic enhancers for the luminol–hydrogen peroxide–horseradish peroxidase chemiluminescence system
N. Kuroda, R. Shimoda, M. Wada and K. Nakashima (Nagasaki, Japan) 131

Flow injection chemiluminometric determination of albumin
N.T. Deftereos, N. Grekas and A.C. Calokerinos (Athens, Greece) 137

Synthesis, characterisation and preliminary analytical evaluation of three oxamide reagents for peroxyoxalate chemiluminescence
N.W. Barnett, R. Bos, R.N. Evans and R.A. Russell (Geelong, Australia) 145

Chemiluminescence determination of catecholamines in human blood plasma using 1,2-bis(3-chlorophenyl) ethylenediamine as pre-column derivatizing reagent for liquid chromatography
G.H. Ragab, H. Nohta and K. Zaitsu (Fukuoka, Japan) 155

Study on the radiative $^5D_4 \rightarrow {}^7F_j$ relaxation dynamics of Tb(III) in electrochemically excited self-assembled dimeric heterodinuclear Tb(III)–Ln(III)′ chelates
T. Ala-Kleme, M. Latva and K. Haapakka (Turku, Finland) 161

Chromatography and electrophoresis

Determination of critical micelle concentrations of anionic surfactants based on ligand exchange micellar electrokinetic chromatography
Z. Chen, J.-M. Lin, K. Uchiyama and T. Hobo (Tokyo, Japan) 173

Amperometric detection for capillary electrophoresis at a sol–gel carbon composite electrode
L. Hua and S.N. Tan (Singapore, Singapore) 179

Preparation and characterization of an L-tyrosine-derivatized β-cyclodextrin-bonded silica stationary phase for liquid chromatography
Y.-Q. Feng, M.-J. Xie and S.-L. Da (Wuhan, PR China) 187

Determination of metal-cyanide complexes by ion-interaction chromatography with fluorimetric detection
E. Miralles, R. Compañó, M. Granados and M.D. Prat (Barcelona, Spain) 197

First purification of heparan sulfate disaccharides with an amine resin used as solid support for peptide synthesis
R.S.H. Carvalho, I.L.S. Tersariol, H.B. Nader and C.R. Nakaie (Sao Paulo, Brazil) 205

Nucleic and protein determination

A novel method for determination of DNA by use of molecular Light Switch' complex of $Ru(bipy)_2(dppx)^{2+}$
L.-S. Ling, Z.-K. He, G.-W. Song, D. Yuan and Y.-e Zeng (Wuhan, China) 209

Enhanced fluorescence of the terbium–gadolinium–nucleic acids system and the determination of nucleic acids
C. Lin, J. Yang, X. Wu, G. Zhang, R. Liu, X. Cao and R. Han (Jinan, China) 219

Application of the dibromohydroxyphenylfluorone–molybdenum(VI) complex to the sensitive spectrophotometric determination of protein
Z.-X. Guo (Tianjin, China and Zigong, China), Y.-M. Hao, X. Cong and H.-X. Shen (Tianjin, China) 225

Ion mobility spectrometry

Corona discharge ion mobility spectrometry of aliphatic and aromatic hydrocarbons
H. Borsdorf, H. Schelhorn, J. Flachowsky, H.-R. Döring and J. Stach (Leipzig, Germany) 235

Preconcentration of metals

An α-amino pyridine resin preconcentration method for iridium in environmental and geological samples
X. Dai, Z. Chai, X. Mao, J. Wang (Beijing, PR China), S. Dong and K. Li (Kunming, PR China) 243

Synthetic zeolites as sorbent material for on-line preconcentration of copper traces and its determination using flame atomic absorption spectrometry
Y.P. de Peña, W. López, J.L. Burguera, M. Burguera, M. Gallignani, R. Brunetto, P. Carrero, C. Rondon and F. Imbert (Mérida, Venezuela) 249

An on-line continuous flow system for copper enrichment and determination by flame atomic absorption spectroscopy
S.L.C. Ferreira, V.A. Lemos, B.C. Moreira, A.C.S Costa (Bahia, Brazil) and R.E. Santelli (Rio de Janeiro, Brazil) 259

Analysis of Fingernails

Determination of nickel in fingernails and forearm skin (stratum corneum)
J. Kristiansen, J.M. Christensen, T. Henriksen (Copenhagen, Denmark), N.H. Nielsen and T. Menné (Hellerup, Denmark) 265

Flow analysis

A flow injection system based on chalcogenide glass sensors for the determination of heavy metals
J. Mortensen (Roskilete, Denmark), A. Legin, A. Ipatov, A. Rudnitskaya, Y. Vlasov (Pitersburg, Russia) and K. Hjuler (Copenhagen, Denmark) 273

Spectrophotometric determination of thiocyanate by sequential injection analysis
J.F. van Staden and A. Botha (Pretoria, South Africa) 279

The analytical characterisation of sub-minute measurement duty cycles in flow injection analysis mass spectrometry, by their carry-over
R. Richmond (Basel, Switzerland) 287

Mass spectrometry

Liquid chromatography–electrospray mass spectrometry and tandem mass spectrometry of ceramides
K. Raith and R.H.H. Neubert (Halle, Germany) 295

Electron paramagnetic resonance Spectrometry

Effect of dielectric constants, sample container dimensions and frequency of magnetic field modulation on the quantitative EPR response
N.D. Yordanov and S. Lubenova (Sofia, Bulgaria) 305

UV-Visible spectrophotometry

Synthesis and analytical applications of 4-aminopyrazolone derivatives as chromogenic agents for the spectrophotometric determination of phenols
Y.C. Fiamegos, C.D. Stalikas, G.A. Pilidis and M.I. Karayannis (Ioannina, Greece) 315

Complexation and acid-base studies

Complex formation of alkali metal ions with 18-crown-6 and its derivatives in 1,2-dichloroethane
Y. Kikuchi and Y. Sakamoto (Morioka, Japan) 325

Study on the stability of Co(III), Mn(III) and Tl(III) ions in acetic acid solutions
S. Michalkiewicz and J. Malyszko (Kielce, Poland) 333

Acid–base behaviour of substituted phenolic substances and resolution of acid strength in tetrahydrofuran
D. Barrón and J. Barbosa (Barcelona, Spain) 339

Standardization of potentiometric sensors and acid–base behaviour of a series of bases in nitrobenzene
D. Barrón, S. Buti and J. Barbosa (Barcelona, Spain) 349

Book review 355

Author Index 359

Calendar of forthcoming meetings N1